

JC20 Rec'd PCT/PTO 06 MAY 2005

CLAIMS

1. A multifunction probe for aircraft, having a mobile vane (1) intended to align with the axis (8) of an air flow around the probe, the mobile vane (1) comprising first pressure pickup means (20, 21) for measuring the total pressure (Pt) of the flow, second pressure pickup means (22, 23) for measuring the static pressure (Ps) of the flow, characterized in that the mobile vane (1) has a profile whose flexure (λ_1 , λ_2) is variable, in that the flexure has a first value (λ_1) over a first part (26, 28) of the profile of the vane (1), in that the flexure has a second constant value (λ_2) over a second part (27, 29) of the profile of the vane upstream of and in the vicinity of the second pickup means (22, 23) for pressure (Ps), and in that the first value (λ_1) is less than the second value (λ_2).
2. The multifunction probe as claimed in one of the preceding claims [sic], characterized in that it includes third pressure pickup means (24, 25), which are intended to measure the incidence (α) of the mobile vane (1) with respect to the air flow, and in that the flexure has a constant value (λ_1) upstream of the third pickup means (24, 25) for pressure (α).
3. The multifunction probe as claimed in one of the preceding claims, characterized in that it is arranged on the skin (6) of the aircraft, in that the first pickup means (20, 21) for pressure (Pt) are located outside a boundary layer developed in the flow in the vicinity of the skin (6) of the aircraft.
4. The multifunction probe as claimed in one of the preceding claims, characterized in that it is arranged on the skin (6) of the aircraft, and in that the first part (26) of the profile is closer to the skin (6) of the aircraft than the second part (27) of the profile.

5. The multifunction probe as claimed in one of the preceding claims, characterized in that the second flexure value (λ_2) is defined so that a value (K_p) of the pressure coefficient of the second pickup means 5 (22, 23) for pressure (P_s) is substantially zero for a given velocity of the air flow.